



MANSCEN SAFETY OFFICE



**KEYS TO SAFE WINTER
DRIVING**

THREE KEYS TO SAFE WINTER DRIVING



- 1. PREPARATION**
- 2. PLANNING**
- 3. EXECUTION**





WINTER

PREPARATION

- Administrative
- Safety Maintenance
- Survival Kit
 - Snow, Ice and Cold Removal
 - Safe Clothing



PREVENTIVE MAINTENANCE

ENSURE MILITARY AND PRIVATELY OWNED VEHICLES HAVE BEEN PREPARED FOR THE WINTER MONTHS AHEAD...

- BATTERIES**
 - ANTIFREEZE**
 - CRACKED WINDSHIELDS**
 - EXHAUST SYSTEM**
 - HEATER / DEFROSTER**
- * TO SEE A MORE COMPLETE CHECK LIST VISIT SAFETY'S HOME PAGE**



PLANNING



Risk Management

Adverse Weather
Conditions

Be Mentally
Prepared

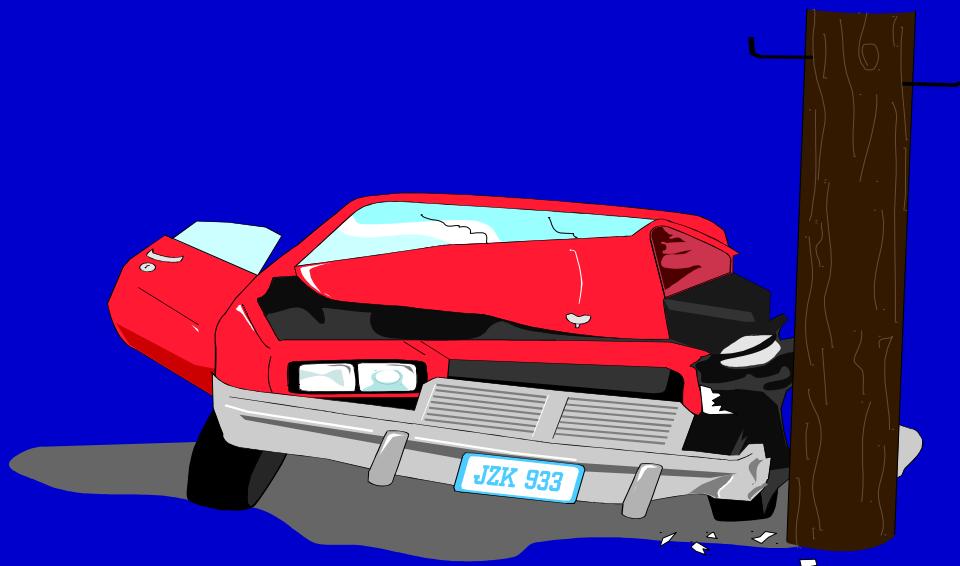
Gather Information

Share Your Plans



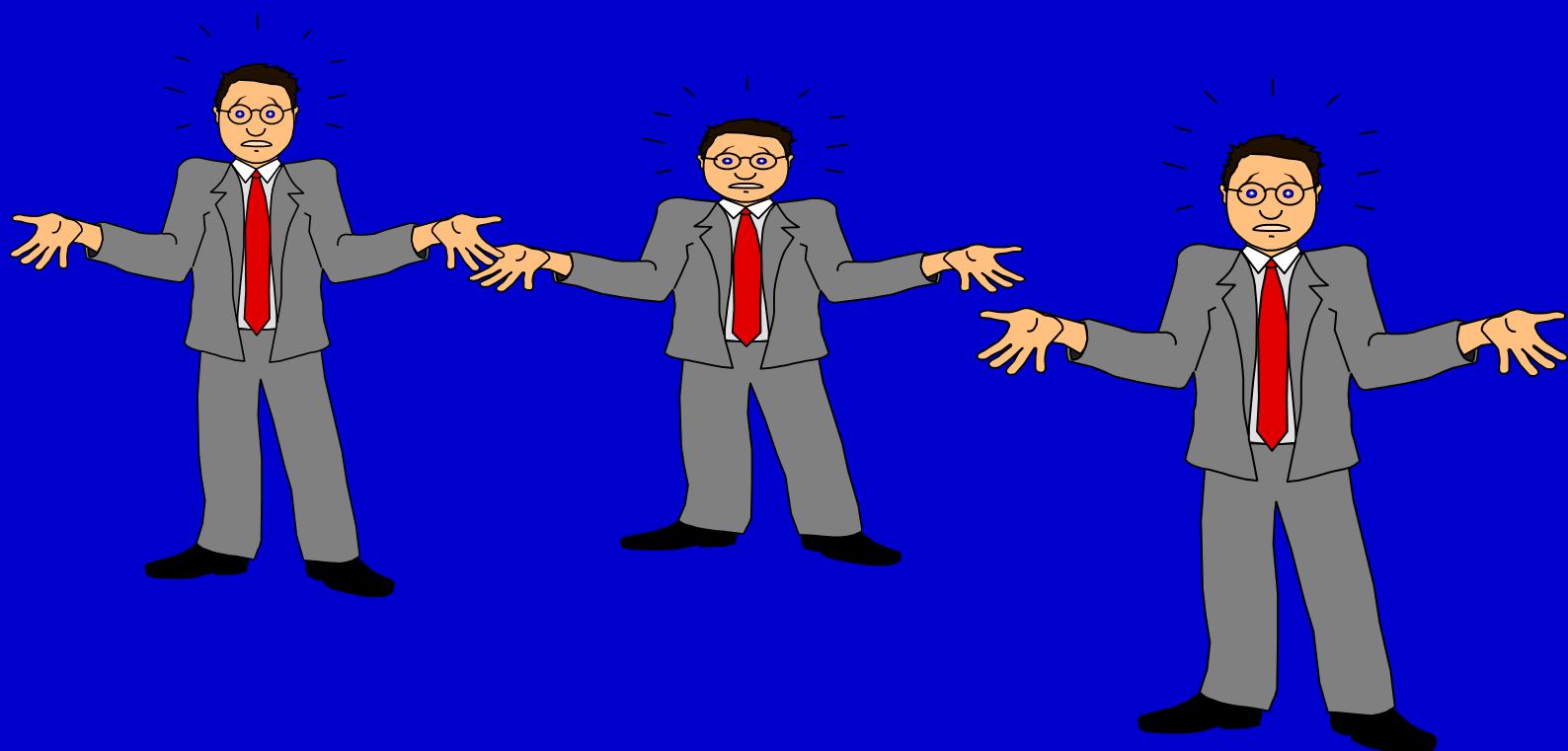
EXECUTION

DEFENSIVE DRIVING TECHNIQUES



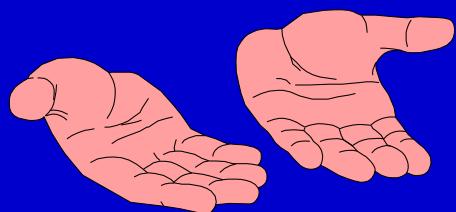
DEFENSIVE DRIVING TECHNIQUES

WHAT ARE THEY?

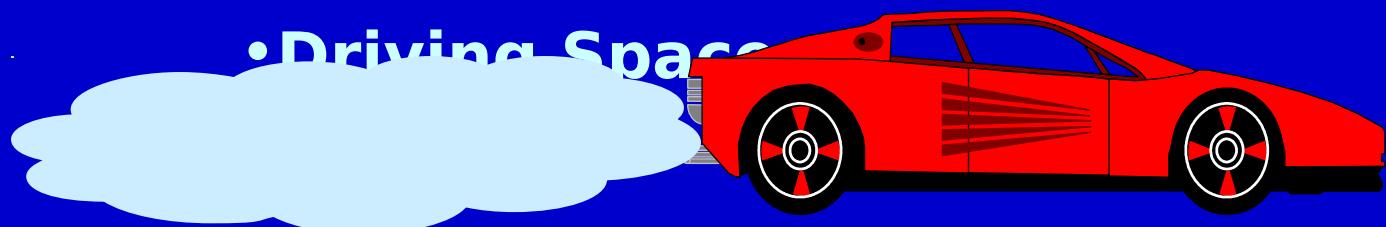


DEFENSIVE DRIVING TECHNIQUES

THEY ARE:



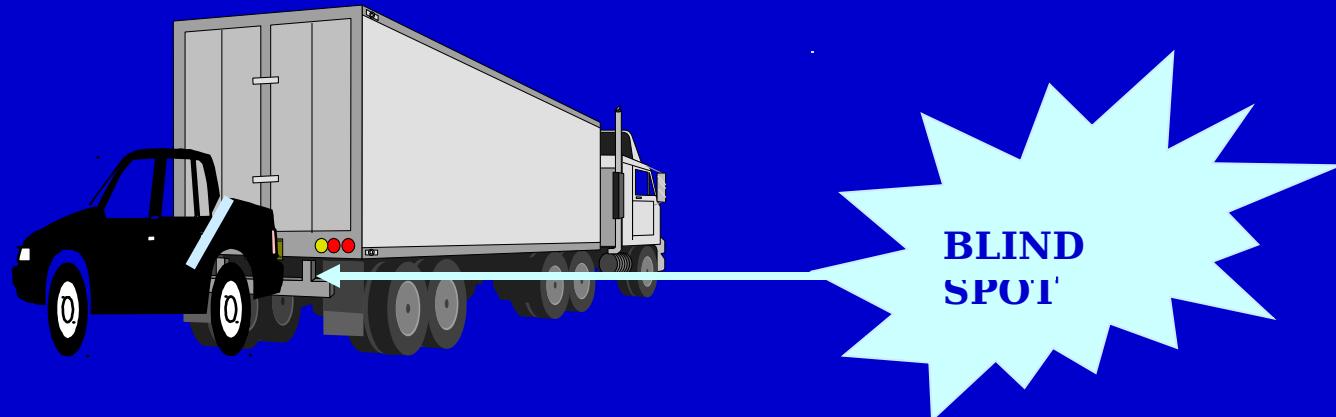
- Communication
- Manage Speed
- Situational Awareness
- Driving Space



COMMUNICATION

“LET OTHERS KNOW”

- Where you are
 - What you plan to do
 - Keep your vehicle where it can be seen



COMMUNICATION

... LET OTHERS KNOW WHERE YOU ARE

USE HEADLIGHTS, BRAKE LIGHTS, AND TURN SIGNALS

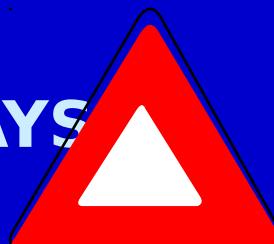
USE HORN

POSITION YOUR VEHICLE SO IT CAN BE SEEN

USE EMERGENCY SIGNALS

- FLARES
- WARNING TRIANGLES

USE EMERGENCY HAZARD SIGNALS (4-WAY)



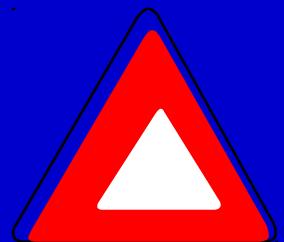


COMMUNICATION



...LET OTHERS KNOW WHAT YOU PLAN TO DO

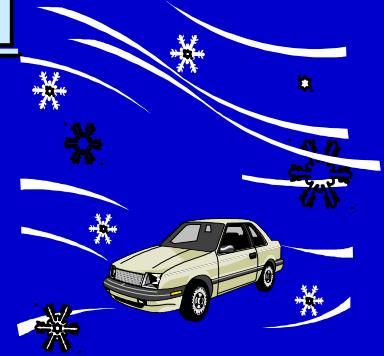
- **SIGNAL CHANGE OF DIRECTION**
- **SIGNAL WHEN SLOWING/STOPPING**





COMMUNICATION

...USE HEADLIGHTS



- **ON RAINY, SNOWY, OR FOGGY DAYS**
 - GRAY DAYS
 - WHEN USING WINDSHIELD WIPERS
 - **PRIOR TO DARKNESS**
 - **WHEN MOVING AND LIGHTS ARE NECESSARY**
 - **TO GET ATTENTION**
 - **TO COMMUNICATE A HAZARD**
 - **WHENEVER IT IS DIFFICULT TO SEE**
- 

COMMUNICATION

... KEEP YOUR VEHICLE ~~N~~ WHERE IT CAN BE
SEEN

- AVOID DRIVING IN VEHICLE "BLIND SPOTS"
- GET THROUGH BLIND SPOTS QUICKLY



COMMUNICATION

... USE HORN

- **TO GIVE WARNING ONLY**
- **A LIGHT TAP IF NO IMMEDIATE DANGER WHEN:**
 - **SOMEONE IS WALKING CLOSE TO ROAD OR ON A BIKE**
 - **PASSING (AS A WARNING)**
 - **APPROACHING INATTENTIVE DRIVER**
 - **HAVING TROUBLE SEEING AHEAD**

COMMUNICATION

... USING HORN

- USE SHARP BLAST WHEN REAL DANGER EXISTS, SUCH AS:

- CHILD RUNNING INTO STREET
- IN DANGER OF BEING HIT
- LOST CONTROL OF VEHICLE



COMMUNICATION

... USING EMERGENCY SIGNALS

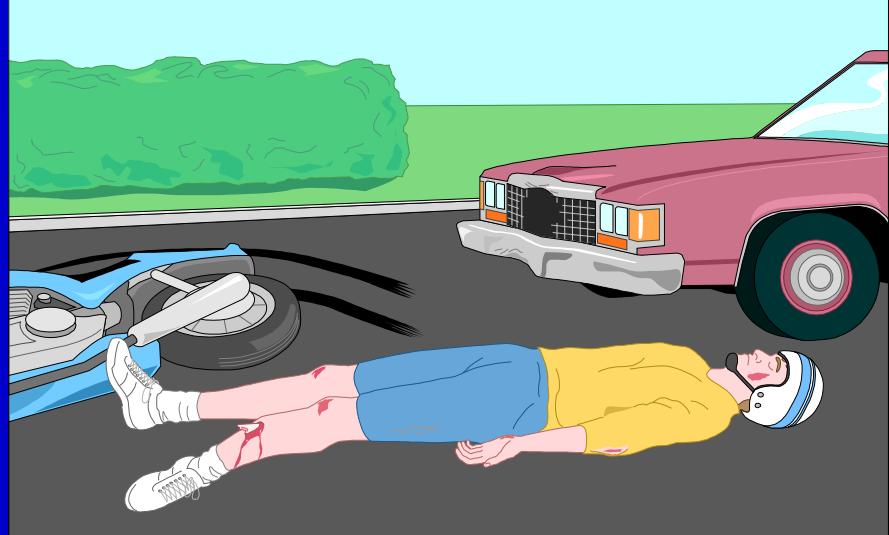
- **EMERGENCY STOPS**

- OFF THE ROAD, OUT OF TRAFFIC
- TURN ON 4-WAYS
- LIFT THE HOOD & TIE WHITE CLOTH TO DOOR HANDLE
- IF IN TRAFFIC, STOP WHERE YOU CAN BE SEEN
- GIVE WARNING (FLARES AND/OR WARNING TRIANGLES)
- IF NO WARNING DEVICES, GIVE HAND WARNING
- DO NOT DO MAINTENANCE IN TRAFFIC

COMMUNICATION

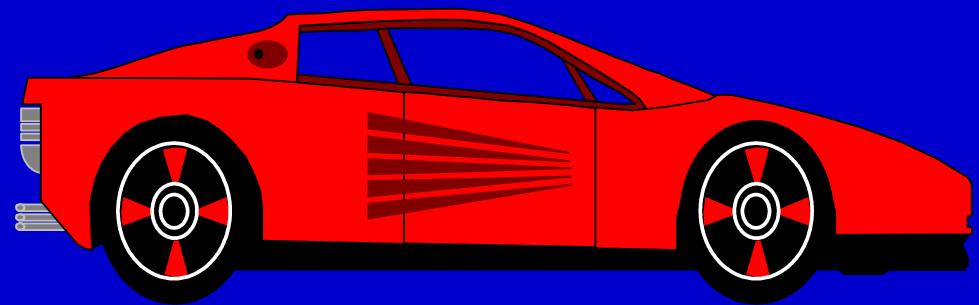
... USING EMERGENCY SIGNALS

- ALSO USE 4-WAY FLASHERS WHEN:
 - UNLOADING
 - AT ACCIDENT SCENE
 - DRIVING SLOW

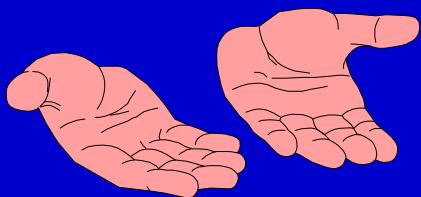


Manage Speed

WHAT IS SPEEDING ?



SPEEDING IS:



**EXCEEDING THE LEGAL OR POSTED SPEED LIMIT
DRIVING TOO FAST FOR CONDITIONS**



MANAGE SPEED

...CONDITIONS AFFECTING SAFE SPEED

- **TRACTION**
- **VISIBILITY**
- **TRAFFIC CONDITIONS**
- **ROAD CHARACERISTICS**



MANAGE SPEED

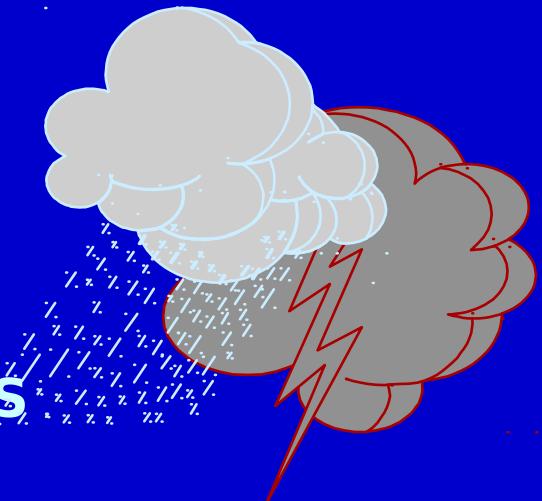
... CONDITIONS AFFECTING SAFE SPEED

TRACTION

- ✓ MEANS TIRE'S GRIP ON THE ROAD
- ✓ DECREASED TRACTION = INCREASED STOPPING DISTANCE
- ✓ ADJUST SPEED FOR DECREASED TRACTION

VISIBILITY

- ✓ STOP WITHIN SEEING DISTANCE
- ✓ ADJUST SPEED TO VISIBILITY CONDITIONS



MANAGE SPEED

... CONDITIONS AFFECTING SAFE SPEED

TRAFFIC CONDITIONS

- ✓ MAINTAIN SAFE SPACE CUSHION
- ✓ ADJUST SPEED TO VOLUME AND FLOW

ROAD CHARACTERISTICS

- ✓ SHAPE AFFECTS TRACTION AND VISIBILITY
- ✓ ADJUST SPEED FOR CURVES AND HILLS



MANAGE SPEED

...MATCHING SPEED TO ROAD SURFACE

✓ **SLIPPERY ROADS**

✓ **SHADY AREAS**

✓ **BRIDGES**

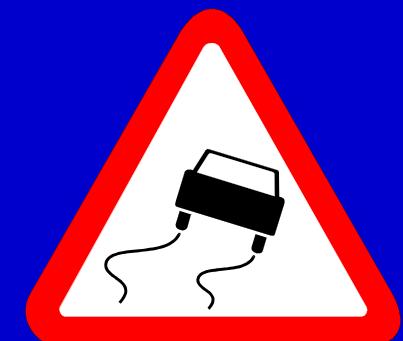
✓ **MELTING ICE**

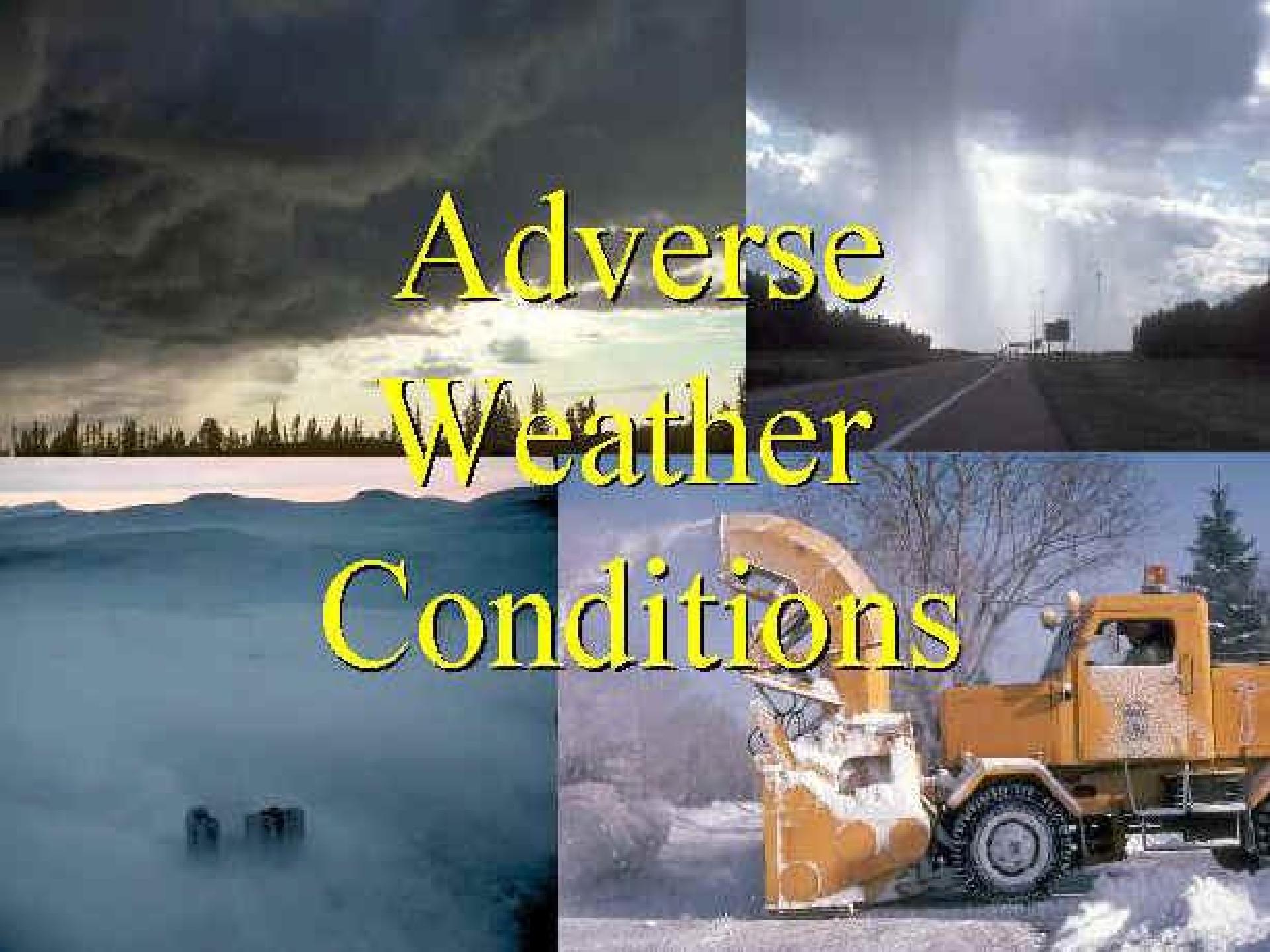
✓ **BLACK ICE**

✓ **VEHICLE ICING**

✓ **RAINS**

✓ **HYDROPLANING**





Adverse Weather Conditions

ADVERSE WEATHER CONDITIONS

VS

Hazards

- What is a hazard ?
- What causes a hazard ?
- What makes a weather condition adverse ?

ADVERSE WEATHER CONDITIONS

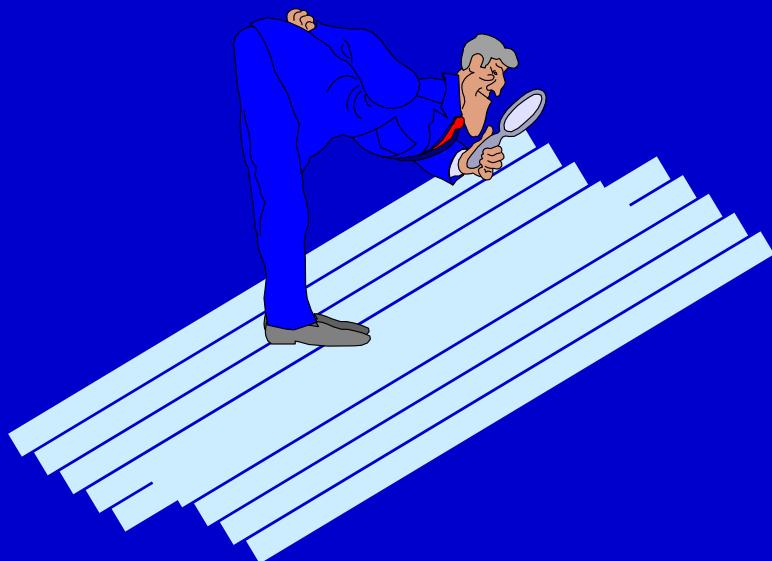
VS

Hazards

- What is a hazard ?
(A source of danger)
- What causes a hazard ?
(A dangerous condition)
- What makes a weather condition adverse ?
(The effects of the hazards)

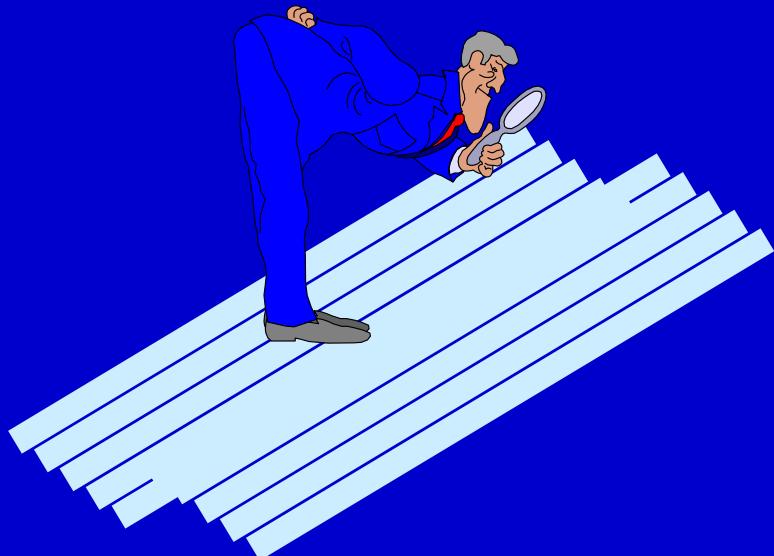
ADVERSE WEATHER CONDITIONS

- Black Ice
- Drizzle/Light Rain
- Ice
- Sleet
- Snow
- Thunderstorms



BLACK ICE

- DANGEROUS BECAUSE YOU CAN'T SEE IT!
- COMMON AREAS YOU FIND IT
 - 1. Bridges/Overpasses
 - 2. Shaded Areas



WEATHER CONDITIONS

BLACK ICE

■ Hazards:

- **Very Slippery Surfaces**
- **Very Poor Traction**
- **Very Poor Braking**
- **Increased Stopping Distances**
- **Very Poor Directional Control**

WEATHER CONDITIONS

BLACK ICE

- Corrective Action:
 - Reduce Speed
 - Increase Following Distance
 - Use Very Light Braking
 - No Quick or Sudden Turn
- Risk: **High**

WEATHER CONDITIONS

DRIZZLE or LIGHT RAIN

■ Hazards:

- **Reduced Visibility**
- **Slippery Surfaces**
- **Reduced Traction**
- **Reduced Braking**
- **Reduced Directional Control**

WEATHER CONDITIONS

DRIZZLE or LIGHT RAIN

■ Corrective Action:

- Reduce Speed
- Moderate Acceleration
- Moderate Braking Action
- Increase Following Distance
- No quick turns

■ Risk: Medium

WEATHER CONDITIONS

ICE

■ Hazards:

- **Very Slippery Surfaces**
- **Poor Traction**
- **Poor Braking**
- **Increased Stopping Distances**
- **Poor Directional Control**

WEATHER CONDITIONS

ICE

■ Corrective Action:

- **Moderate Acceleration**
- **Reduce Speed**
- **Use Light Braking Action**
- **Increase Following Distance**
- **No quick turns**

■ Risk: **High**

WEATHER CONDITIONS

SLEET

■ Hazards:

- **Very Slippery Surfaces**
- **Poor Traction**
- **Poor Braking**
- **Increased Stopping Distances**
- **Poor Directional Control**

WEATHER CONDITIONS

SLEET

■ Corrective Action:

Reduced Speed

- Use Very Light Braking Action
- Increase Following Distance
- No Quick or Sudden Turns

■ Risk: **High**

WEATHER CONDITIONS

SNOW

■ Hazards:

- **Slippery Surfaces**
- **Reduced Visibility**
- **Reduced Traction**
- **Reduced Braking**
- **Increased Stopping Distances**
- **Reduced Directional Control**

WEATHER CONDITIONS

SNOW

■ Corrective Action:

- **Reduce Speed**
- **Moderate Braking Action**
- **Increase Following Distance**
- **Moderate Directional Control**

■ Risk: High

WEATHER CONDITIONS

THUNDERSTORMS

■ Hazards:

- **Slippery Surfaces**
- **Reduced Visibility**
- **Reduced Traction**
- **Reduced Braking**
- **Reduced Directional Control**

WEATHER CONDITIONS

THUNDERSTORMS

■ Corrective Action:

- **Reduce Speed**
- **Moderate Braking Action**
- **Increase Following Distance**
- **No Quick Turns**

■ Risk: Medium

MANAGE SPEED

... SPEED AND CURVES

- **ADJUST SPEED**
- **TAKING A CURVE TOO FAST =**
 - WHEELS LOSE TRACTION - STRAIGHT AHEAD**
 - WHEELS KEEP TRACTION - ROLL OVER**
- **SLOW DOWN BEFORE CURVE**
 - BRAKING = SKID**
 - EXIT RAMPS ARE CURVED**
 - **SLOW TO RIGHT SPEED**
 - **BE READY TO STOP AT BOTTOM OF EXIT**



SKIDS

If your vehicle begins to skid, take the following actions:

- 1. Front end skids: Release the brake and let the front wheels roll freely to regain traction and steering control.**
- 2. Rear end skids: Take foot off of accelerator and turn wheels in the direction that the rear of the vehicle is skidding, and pump brakes lightly.**

WINTER DRIVING HAZARDS

- Ice, frost, and snow on bridges and overpasses
- Poorly marked state and county highways
- Drifting snow
- Poor visibility
- Carbon monoxide
- Poor traction
- High water at river crossings
- Slippery roads caused by wet leaves

VEHICLE OCCUPANT SAFETY

Seat belts properly worn by all passengers
Use of approved child safety seats
Infants not seated in front seats of vehicles with Passenger air bags.

Summary

- **Cold weather greatly affects you and the operating performance of your privately owned vehicle and your equipment.**

- **Remember the keys to safe winter driving is:**
- **Preparation**
- **Planning**
- **Execution**
- **Know the Adverse Weather Conditions**
- **Know the hazards and how to react to them**

Questions